



**Chandra X-ray  
Observatory Center**

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**J1027 and J1708:** Two of seven triple galaxy mergers that are located between 370 million and one billion light years away from Earth.  
(Credit: )

**Caption:** This pair of objects comes from a study of seven triple galaxy mergers. By using Chandra and other telescopes, astronomers determined what happened to the supermassive black holes at the centers of the galaxies after the collision of three galaxies. The results show a range of outcomes: a single growing supermassive black hole, four doubles, a triple, and one system where no black holes are rapidly pulling in matter. Two of the doubles are shown here in X-rays (Chandra) and optical light (SDSS and Hubble). This information tells astronomers more about how galaxies and the giant black holes in their centers grow over cosmic time.

**Scale:** Image of J1027 is about 12.6 arcsec (52,000 light years) across.  
Image of J1708 is about 42 arcsec (190,000 light years) across.

*Chandra X-ray Observatory ACIS Image*

*CXC operated for NASA by the Smithsonian Astrophysical Observatory*